

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of Stephen A. FODOR *et al.*

Application No.: 10/694,541

Group Art Unit: 1634

Filed: October 28, 2003

Examiner: Jeanine A. Goldberg

For: Arrays for Detecting Nucleic Acids

Commissioner for Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop Amendment
Randolph Building
401 Dulany Street
Alexandria, VA 22314

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(c)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56,
Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97
and 1.98.

- Pursuant to 37 C.F.R. §1.98, copies of documents 50-61, 64-71, 74, 78, 80, 81 and 86-94 cited in the attached Form PTO-1449 are enclosed.
- Copies of the remaining publications listed on the attached Form PTO-1449 are not being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial Nos.:
09/768,626, filed January 25, 2001 (now US Patent No. 6,576,424);
09/670,563, filed September 27, 2000 (now US Patent No. 6,451,536);
09/362,089, filed July 28, 1999 (now US Patent No. 6,440,667);
09/056,927, filed April 8, 1998 (now US Patent No. 6,197,506);
08/670,118, filed June 25, 1996 (now US Patent No. 5,800,992);
08/168,904, filed December 15, 1993 (now abandoned);
07/624,114, filed December 6, 1990 (now abandoned); and
07/362,901, filed December 7, 1989 (now abandoned)
to which the above-identified application claims priority under 35 U.S.C. §120.

[x] Copies of documents that were not submitted in the above-mentioned related United States Patent Applications may be found in related United States Patent Application Nos.:
10/098,485, filed March 18, 2002;
09/585,557, filed June 2, 2000 (now US Patent No. 6,395,491);
09/585,556, filed June 2, 2000 (now US Patent No. 6,544,739);
09/585,659, filed June 2, 2000 (now US Patent No. 6,355,432);
09/054,420, filed April 3, 1998(now US Patent No. 5,925,525);
08/873,034, filed June 11, 1997(now US Patent No. 5,871,928); and
08/348,471, filed November 30, 1994 (now US Patent No. 6,420,169)
Should the Examiner be unable to locate a document, a copy will be provided upon request.

[x] Applicants would also like to bring to the Examiner's attention information from Civil Action No. 04-901-JJF in the U.S. District Court for the District of Delaware. Applicants note that this civil action involves multiple patents, including U.S. Patent Nos. 6,355,432 and 6,646,243, owned by the assignee of this application, , and the action is stylized as Affymetrix v. Illumina. Certain non-patent references asserted by Illumina as relevant to the patentability of various involved Affymetrix patents and/or certain claims of the '432 and '243 patents, which claims are generally directed to collections of encoded beads which have binding polymers of different target specific sequence attached thereto or to substrates comprising beads, spheres or particles comprising nucleic acids attached thereto, have been provided in the attached Form 1449. Additionally, the following patent documents were also asserted by Illumina as relevant to the patentability of certain claims of the '432 and 243 patents: EP 392,546, 5,219,763, GB 1561042, 5,028,545, 5,219,763, 5,700,637, 4,877,965, CA 1248873 and 5,348,855, all of which have been cited herein or previously provided in Information Disclosure Statements.

Should the Examiner wish to review any documents in applicants' possession related to this action, the Examiner is invited to contact the undersigned and any documents requested will be forwarded.

[x] No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO-1449 are being provided in accordance with MPEP 609.04(a).

- [] Publication(s) __ listed on the attached Form PTO-1449 were cited in a foreign search or examination report corresponding to __ application serial no. __ and mailed on __.
- [] Enclosed is a copy of a non-English publication(s) __. Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).
- [] Enclosed is a copy of a non-English publication(s) __. English language publication __ (copy enclosed) claims priority from this non-English publication.
- [] Enclosed is an explanation of non-English publication(s) __ for which an English translation is not available.
- [] Enclosed is an English translation of non-English publication(s) __ cited in the attached Form PTO/SB/08A.
- [x] The Examiner's attention is directed to related co-pending United States Patent Application Serial Nos.:
 - 10/098,485, filed March 18, 2002, cited herewith as US 2003/0104411;
 - 10/102,774, filed March 22, 2002, cited herewith as US 2002/0192684;
 - 10/102,915, filed March 22, 2002, cited herewith as US 2003/0003475;
 - 10/098,484, filed March 18, 2002, cited herewith as US 2003/0119011;
 - 10/125,428, filed April 19, 2002, cited herewith as US 2002/0155491;
 - 10/125,460, filed April 19, 2002, cited herewith as US 2002/0155492;
 - 10/125,530, filed April 19, 2002, cited herewith as US 2003/0017484;
 - 10/694,536, filed October 28, 2003, cited herewith as US 2004/0248147;
 - 10/993,432, filed November 22, 2004, cited herewith as US 2005/0112676;
 - 10/992,782, filed November 22, 2004, cited herewith as US 2005/0158743; and
 - 10/992,772, filed November 22, 2004, cited herewith as US 2005/0164249

This Information Disclosure Statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing of:

- [x] a final action under 37 C.F.R. §1.113;
- [] a notice of allowance under 37 C.F.R. §1.311; or
- [] an action that otherwise closes prosecution in this application.

In accordance with 37 C.F.R. §1.97(c) also enclosed is:

- [x] Fee under 37 C.F.R. §1.17(p) in the amount of \$180.00; or
- [] Statement as specified in 37 C.F.R. §1.97(e):

[] Each item of information contained in the Information Disclosure Statement cited herein was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of the Information Disclosure Statement; or

[] No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO-1449s to the undersigned. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 50-1283.

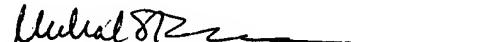
Dated: June 12, 2006

USPTO Customer No. 000033522

COOLEY GODWARD LLP
ATTN: Patent Group
The Bowen Building
875 15th Street, NW Suite 800
Washington, DC 20005-2221
Phone: (202) 842-7800
Fax: (202) 842-7899

By:

Respectfully submitted,
COOLEY GODWARD LLP


Michael S. Tuscan, Ph.D.
Reg. No. 43,210

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

PTO Form 1449

JUN 12 2006

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PATENT TRADEMARK OFFICE

Initial

Docket No.

Date

Name

Class

Sub-Class

Filing Date

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	Attorney Docket No. AFFY-003/26US	Application No. 10/694,541
	Applicants: Stephen P.A. FODOR <i>et al.</i>	
	PAGE 2 of 5	
PTO Form 1449	Filing Date: October 28, 2003	Group Art Unit: 1634

U.S. PATENT DOCUMENTS

Initial	Document No.	Date	Name	Class	Sub-Class	Filing Date
36.	US 5,484,908	01/16/1996	Froehler <i>et al.</i>			
37.	US 5,556,752	09/17/1996	Lockhart <i>et al.</i>			
38.	US 5,787,032	07/28/1998	Heller <i>et al.</i>			
39.	US 5,835,404	11/10/1998	Heller <i>et al.</i>			
40.	US 5,925,525	07/20/1999	Fodor <i>et al.</i>			
41.	US 6,067,246	05/23/2000	Heller <i>et al.</i>			
42.	US 6,103,463	08/15/2000	Chetverin <i>et al.</i>			
43.	US 6,140,044	10/31/2000	Besemer <i>et al.</i>			
44.	US 6,270,961	08/07/2001	Drmanac			
45.	US 6,355,432	03/12/2002	Fodor <i>et al.</i>			
46.	US 6,395,491	05/28/2002	Fodor <i>et al.</i>			
47.	US 6,420,169	07/16/2002	Read <i>et al.</i>			
48.	US 6,451,536	09/17/2002	Fodor <i>et al.</i>			
49.	US 6,576,424	06/10/2003	Fodor <i>et al.</i>			

FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub-Class	Translation
50.	CA 1248873	01/17/1989	Canada			
51.	EP 0 171 150 A2	02/12/1986	Europe			
52.	EP 0 173 339 A2	03/05/1986	Europe			
53.	EP 0 185 547 A2	06/25/1986	Europe			
54.	EP 0 225 807 A2	06/16/1987	Europe			
55.	EP 0 232 967 A2	08/19/1987	Europe			
56.	EP 0 235 726 A2	09/09/1987	Europe			
57.	EP 0 237 362 A1	09/16/1987	Europe			
58.	EP 0 237 362 B2	03/11/1992	Europe			
59.	EP 0 281 927 B1	06/28/1995	Europe			
60.	EP 0 514 927	11/25/1992	Europe			
61.	WO 95/09248	04/06/1995	WIPO			

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
62.	Avers, C.J., "Information Storage and Flow," p. 111, and "Figure 4-13," p.116, in <i>Molecular and Cell Biology</i> , Addison-Wesley Publ. Co., Reading, MA, (1985).		
63.	Craig, A.G., <i>et al.</i> , "Labelling oligonucleotides to high specific activity (I)," <i>Nucl. Acids Res.</i> 17(12):4605-4610, IRL Press, Oxford England (1989).		
64.	Crkvenjakov <i>et al.</i> "Miniaturization of Sequencing by Hybridization (SBH): A Novel Method For Genome Sequencing" abstract no. P37, DOE/NIH Human Genome Contractors/Grantee Workshop (Nov. 1989)		
65.	Crkvenjakov <i>et al.</i> "Miniaturization of Sequencing by Hybridization (SBH): The 'Sequencing Chip' Concept" 19 pages, (poster).		
66.	Crkvenjakov, R. and R. Drmanac, "An Integral Approach for Complex Genome Studies," research proposal submitted Office of Health and Environmental Research, U.S. Department of Energy, 54 pages (Oct. 1990)		
67.	Drmanac, R., <i>et al.</i> , "DNA Sequence Determination by Hybridization: A Strategy for Efficient Large-Scale Sequencing," <i>Science</i> 260:1649-1652, American Association for the Advancement of Science, Washington D.C. (1993)		
68.	Drmanac, R., <i>et al.</i> , "SBH and the Integration of Complementary Approaches in the Mapping, Sequencing, and Understanding of Complex Genomes," The Second International Conference on Bioinformatics, Supercomputing and Complex Genome Analysis: Proceedings of the June 4-7, 1992 Conference at St. Petersburg Beach, Florida. pp. 121-134, (1993).		
69.	Drmanac, R., <i>et al.</i> , "Prospects For Miniaturized, Simplified And Frugal Human Genome Project: The 'Sequencing Chip' Concept," 10 pages (Oct. 1989).		
70.	Drmanac, R., <i>et al.</i> , "Towards Genome DNA Sequencing Chip Based on Oligonucleotide Hybridization," 2 pages.		
71.	Drmanac, R., <i>et al.</i> , "Sequencing by hybridization: towards an automated sequencing of one million M13 clones arrayed on membranes," <i>Electrophoresis</i> 13:566-573, Verlag Chemie, Weinheim, Germany (1992)		
72.	Durland, R.H., <i>et al.</i> , "Selective binding of pyrido[2,3-d]pyrimidine 2'-deoxyribonucleoside to AT base pairs in antiparallel triple helices," <i>Bioconjugate Chem.</i> 6:278-282, American Chemical Society, Washington, District of Columbia (1995).		
73.	Elder, J.K., "Analysis of DNA Oligonucleotide Hybridization Data by Maximum Entropy," pp. 363-371, in <i>Maximum Entropy and Bayesian Methods</i> , eds. Mohammad-Djafari and Demoment, Kluwer, Dordrecht, Germany (1992).		
74.	Elder, J.K., "Image Processing in Nucleic Acid Sequence Analysis," 166 pages, A thesis submitted for the degree of Doctor of Philosophy, University of Oxford (1993)		
Examiner		Date Considered	
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

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		Filing Date: October 28, 2003	Group Art Unit: 1634
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
75.	Ellis, R.W., "The Applications of Synthetic Oligonucleotides to Molecular Biology," <i>Pharmaceutical Research</i> 3(4):195-207, Thieme, Stuttgart, Germany (1986).		
76.	Frischauf, A.M., <i>et al.</i> , "Lambda phage vectors--EMBL series," <i>Methods in Enzymology</i> 153:103-115., Academic Press, New York, New York (1987).		
77.	Hultman, T., <i>et al.</i> , "Direct solid phase sequencing of genomic and plasmid DNA using magnetic beads as solid support," <i>Nucl. Acids Res.</i> 17(13):4937-4946, IRL Press, Oxford, England (1989).		
78.	Lennon, G.G. and H. Lehrach, "Hybridization analyses of arrayed cDNA libraries," <i>Trends Genet.</i> 47(10):314-317, Elsevier Science Publishers B.V., Amsterdam, The Netherlands (1991).		
79.	Lysov, I.u.P., <i>et al.</i> , "A new method for determining the DNA nucleotide sequence by hybridization with oligonucleotides," <i>Doklady Biochem.</i> 303:355-452, Consultants Bureau, New York, New York (1988).		
80.	Maskos <i>et al.</i> , "A study of oligonucleotide reassociation using large arrays of oligonucleotides synthesized on a glass support," <i>Nucl. Acids Res.</i> 21(20):4663-4669, Oxford University Press, Oxford, England (1993).		
81.	Maskos, U., A Novel Method Of Nucleic Acid Sequence Analysis, Doctoral Thesis, Univ. of Oxford (1991)		
82.	McBride, L.J., <i>et al.</i> , "Automated DNA Sequencing Methods Involving Polymerase Chain Reaction," <i>Clin. Chem.</i> 35(11):2196-2201, American Association For Clinical Chemistry, Washington, District of Columbia (1989).		
83.	Poster, Cold Spring Harbor Symposium on Genome Mapping and Sequencing, (Apr. 1988).		
84.	Sambrook, J., <i>et al.</i> , "Conditions for Hybridization of Oligonucleotide Probes," pp. 11.45-11.47, in <i>Molecular Cloning, A Laboratory Manual, 2nd Edition</i> , Sambrook, J., and Russell, D.W., eds., Cold Spring Harbor Lab. Press, Cold Spring Harbor, New York (1989).		
85.	Southern, E.M., <i>et al.</i> , "Report on the Sequencing by Hybridization Workshop," <i>Genomics</i> 13:1378-1383, Academic Press, San Diego, California (1992).		
86.	Stodolsky, M., "Sequencing By Hybridization (SBH) The Rasomir Crkvenjakov Laboratory in 1989," 4 pages, (June 1989)		
87.	Strezoska, Z., <i>et al.</i> , "DNA sequencing by hybridization: 100 bases read by a non-gel-based methods," <i>Proc. Natl. Acad. Sci. USA</i> 88:10089-10093, National Academy of Sciences, Washington, D.C. (1991)		
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
88.	Drmanac, R., <i>et al.</i> , "Genome Sequencing Machine," 6 pages, materials from Hyseq, Inc. (publication date unknown).		
89.	Khrapko, K.R., <i>et al.</i> , "A method for DNA sequencing by hybridization with oligonucleotide matrix," <i>DNA Sequence - J. DNA Sequencing and Mapping</i> 1:375-388 (1991).		
90.	Khrapko, K.R., <i>et al.</i> , "Hybridization of DNA with Oligonucleotides Immobilized in Gel: A Convenient Method for Detecting Single Base Substitutions," <i>Molecular Biology</i> 25:581-591 (Dec. 1991) (Russian original volume 25(3) May-Jun. 1991).		
91.	Kreindlin, E.Y., <i>et al.</i> , "A Sequenator for Analysis of Diagnostic and Sequencing Microchips," 2 pages, materials from Hyseq, Inc. (publication date unknown).		
92.	Lysov, Y.P., <i>et al.</i> , "A New Method for Determining the DNA nucleotide Sequence by Hybridization with Oligonucleotides," <i>Doklady Biochemistry</i> 303:436-438 (May 1989) (Russian original volume 303(1-6) Nov.-Dec. 1988).		
93.	Stodolsky, M., "Sequencing by Hybridization (SBH) R&D at the Center for Genetic Engineering in Belgrade, Yugoslavia: The Radomir Crkvenjakov Laboratory in 1989," 6 pages, internal meeting report (1989).		
94.	Crkvenjakov, R., "Sequencing of Megabase Plus DNA by Hybridization: Method Development ENT," excerpt from DOE Grant No. DE-FG02-88ER60699, Final Technical Progress Report, 18 pages (1990).		
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